# PROJECT DESCRIPTION

## GENERAL:

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 144 AND DELREY AVE IN BALTIMORE COUNTY. STREET LIGHTING, PAVEMENT MARKINGS, TRAFFIC SIGNAL HEADS AND SIGNS WILL BE INSTALLED AT THIS INTERSECTION.

MD 144 (Frederick Road) IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

## INTERSECTION OPERATION:

THE INTERSECTION SHALL OPERATE IN A NEMA (4) FOUR PHASE, SEMI- TRAFFIC-ACTUATED MODE, WITH A PUSHBUTTON ACTUATED PEDESTRIAN MOVEMENT TO CROSS THE EAST LEG OF MD 144. MD 144 APPROACHES SHALL OPERATE CONCURRENTLY WITH DELREY AVE APPROACHES OPERATING CONCURRENTLY.

A NEMA EIGHT- PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER HOUSED IN A SIZE '6' BASE-MOUNTED CABINET WITH ALL NECESSARY EQUIPMENT FOR AN OVERHEAD FEED BY BGE WILL BE INSTALLED AT MD 144 AND DELREY AVE.

## SPECIAL NOTES:

UPON THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY MR ROBERT SNYDER, OF THE SHA 410- 787-7631 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST ADDRESS, ZIP CODE, AND PHONE NUMBER.

#### EQUIPMENT LISTS

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION

ITEM	QUANTITY	DESCRIPTION
9002 9003 9004 9032	1 EA 1 EA 1 EA 1 EA	(CONT/CAB/ADD) DETECTOR AMPLIFIER 4-CH RACK MT (CONT/CAB/ADD) DETECTOR PANEL (CONT/CAB/ADD) DETECTOR RACK POWER SUPPLY [UPDATED] 70' MAST ARM SINGLE X 27' - 0" POLE (w/o ANCHOR BOLTS CONTRACTOR TO SUPPLY ANCHOR BOLTS WITH FOUNDATION)
9066 9081 9087 9589	2 EA 1 EA 1 EA 34 SF 2 EA 2 EA	[UPDATED] PEDESTAL POLE 10' WITH T-BASE AND ANCHOR BOLTS CABINET INTERSECTION MONITOR, SIZE 6 CONTROLLER ASC II W/ TELEMETRY FLAT SHEET ALUM SIGN-YELLOW, ORANGE, & SILVER (SF) R3-5L (Left Turn Only) (30"X36") MAST ARM MOUNTED W3-3 (New Signal Ahead) (36"X36") GROUND MOUNTED
9590	53 SF 1 EA 1 EA 2 EA	FLAT SHEET ALUM. SIGN-BLUE OR GREEN (SF) D-3(1) (Delrey Ave) (VAR.X16") MAST ARM MOUNTED D-3(1) (Delrey Ave) (VAR.X16") MAST ARM MOUNTED D-3(1) (Frederick Rd ) (VAR.X16") MAST ARM MOUNTED

## EQUIPMENT LISTS

ITEM	QUANTI	TY	DESCRIPTION
1001	1	EΑ	MAINTENANCE OF TRAFFIC
2002	4	EΑ	TEST PIT EXCAVATION
5001	1	EΑ	HEAT APP PERM THERMO PAVE MARK ARROW
5004	110	LF	12 IN WHT HEAT APP THERMO PAVE MARK
5005	100	LF	24 IN WHT HEAT APP THERMO PAVE MARK
5006	110	LF	5 IN WHT HEAT APP THERMO PAVE MARK
5007	2520	LF	5 IN YEL HEAT APP THERMO PAVE MARK
5008	1225	LF	REMOVAL OF EXISTING PAVEMENT LINE MARKINGS - ANY WIDTH
6004	340	SF	4 INCH CONCRETE SIDEWALK
NEG	2	EΑ	I PED POLE W/BREAKAWAY BASE
8010	4	EΑ	F&I 12 IN PED SIG HEAD SECTION
8011	12	EΑ	F&I 12 IN VEH SIG HEAD SECTION (POLYCARBONATE)
8013	1	EΑ	F&I 15' BRAC ARM FOR SIG STRUCT
8014	1	EΑ	F&I 250W HPS LUMIN W/ PHOTOCELL
8015	1	EΑ	F&I 3" WEATHERHEAD
8019	12	EΑ	F&I 8 IN VEH SIG HEAD SECTION (POLYCARBONATE)
8020	1	EΑ	F&I CONTROL AND DISTRIBUTION EQUIPMENT FOR SIGNAL
8039	1	EA	I STEEL POLE & SINGLE MAST ARM (AS)
8032	2	EΑ	F&I PUSHBUTTON AND SIGN
8046	3	EΑ	PAINT STRUCTURE ON GROUND
8051	22	LF	3" PVC SCH 80 CONDUIT-TRENCHED
8053	51	LF	4" PVC SCH 80 CONDUIT-TRENCHED
8057	7.5	CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8059	75	LF	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4 INCH X 6 INCH
8060	205	LF	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8061	25	LF	FURNISH AND INSTALL 1 INCH ELECTRICAL CONDUIT - GALVANIZED RISER
8067	140	LF	FURNISH AND INSTALL 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8068	18	LF	FURNISH AND INSTALL 1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8070	75	LF	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG- THHN/THWN
8072	3	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8074	19	SF	INSTALL GROUND MOUNTED SIGN
8075	68	SF	INSTALL OVERHEAD SIGN
8080	4	EA	FURNISH AND INSTALL GROUND ROD -3/4INCH DIAMETER X 10 FOOT LENGTH
8081	345	LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8082	280	LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO 14 AWG) FURNISH AND INSTALL ELECTRICAL CABLE - 3 CONDUCTOR (NO 14 AWG)
8083	290	LF	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)  FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)
8084	115	LF	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)  FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO 14 AWG)
8085	440	LF	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO 14 AWG)  FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO 12 AWG) TC
8086	80	LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO 12 AWG) TO FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO 14 AWG)
8087	1365	LF	FURNISH AND INSTALL COOP WIRE ENCASED IN FLEXIBLE TOBING (NO 14 AWG) FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)

FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)

INSTALL CONTROLLER AND CABINET - BASE MOUNT

# PROJECT CONTACTS:

THE CONTACT PERSONS FOR DISTRICT 4 ARE AS FOLLOWS:

MR. SCOTT RANDALL ASSISTANCE DISTRICT ENGINEER-TRAFFIC PHONE: 410-321-2781/2885

CHIEF, SIGNAL OPERATION SECTION

MR. ED RODENHIZER

PHONE: 410-787-7652

MS. SUENETTE POPE DISTRICT UTILITY ENGINEER PHONE: 410-321-2841

MR. STEVE MARCISZEWSKI ASSISTANT DISTRICT ENGINEER-MAINTENANCE PHONE: 410-321-2761

MR. RICHARD L. DAFF, SR. CHIEF, TRAFFIC OPERATION DIVISION PHONE: 410-787-7630

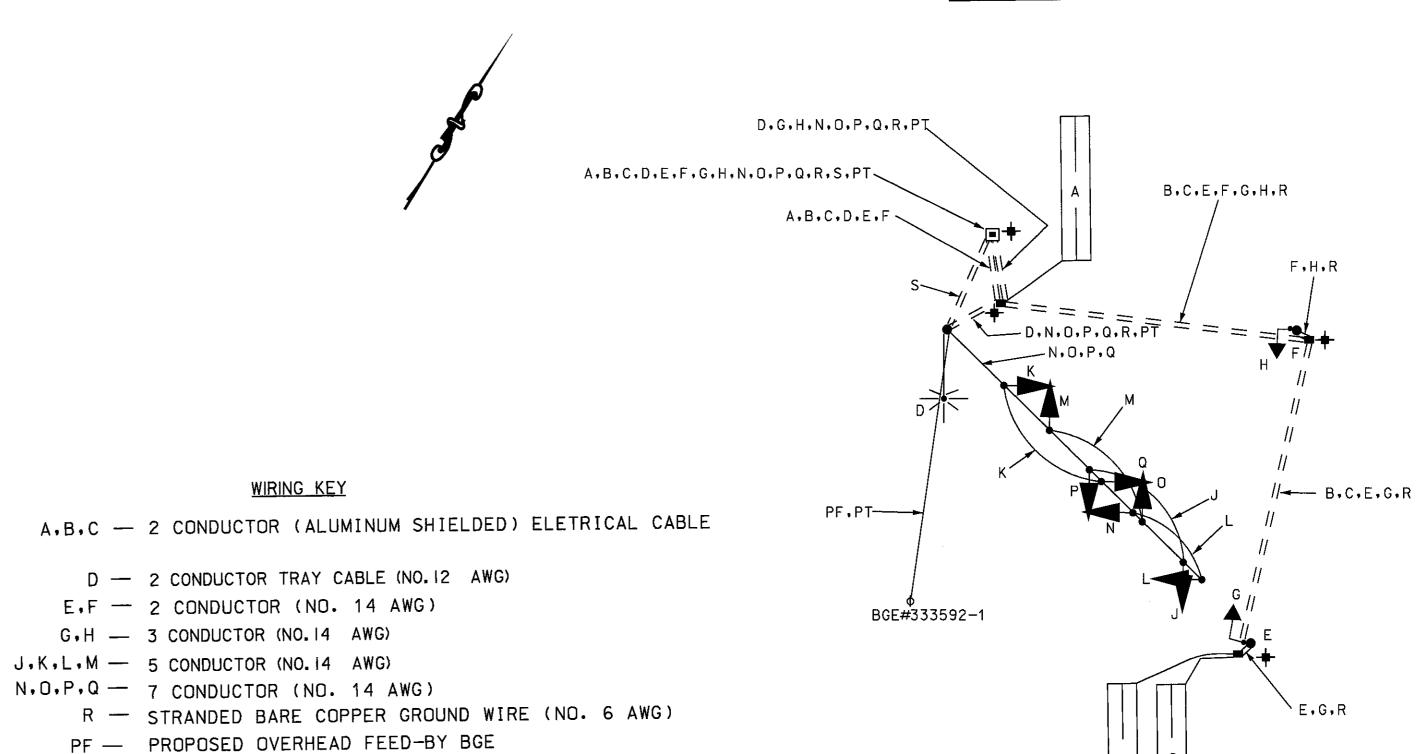
MR. ROBERT SNYDER ASST. CHIEF, TRAFFIC OPERATION DIVISION PHONE: 410-787-7631

### PHASE CHART

1	2	3	4	5	6	7	8	9	1Ø
RYG	RYG	RYG	R Y G	R Y G	R Y G	R Y G	RYG	*	*

Phase 2 & 6	G	G	G	G	R	R	R	R	DW	DW	<b>—</b>
2 & 6 change	Y	Υ	Y	Y	R	R	R	R	DW	DW	<b>→</b>
Phase 4 & 8 ALT	R	R	R	R	G	G	G	G	WK	WK	•
PED Clearance	R	R	R	R	G	G	G	G	FL/DW	FL/DW	
4 & 8 ALT change	Ŕ	R	R	R	Υ	Y	Y	Υ	DW	DW	· · · •
Phase 4 & 8	R	R	R	R	G	G	G	G	DW	DW	<u> </u>
4 & 8 change	R	R	R	R	Υ	Y	Υ	Υ	DW	DW	<u> </u>
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	<b>*</b>

### WIRING DIAGRAM



BRUDIS & ASSOCIATES, INC.

WIRING KEY

S - 3 WIRE (NO.: 4 AWG) FOR TRAFFIC SIGNAL ELECTRICAL SERVICE

PT — PROPOSED TELEPHONE DROP

 →
 —
 GROUND ROD

9220 RUMSEY ROAD; SUITE 110



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION GENERAL INFORMATION SHEET

MD 144 and DELREY ROAD

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DRAWN BY: CHECKED BY:	M. A. MEARS R. MILSTEAD	F.A.P. NO. S.H.A. NO.	BATULAST/BST	TS NO. 4236GI	SHEET NO	
SCALE:	NONE 05/29/03	COUNTY:	<u>BALTIMORE</u>	T.I.M.S. NO. E 9 2 4		
DATE:	037,237.03	LOG MILE:	0414403.90		3 0F	

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